

## **ATTACHMENT F – FACT SHEET**

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

The Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Some sections or subsections of the Order have therefore been identified as “not applicable” to this group of dischargers. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to the dischargers authorized by the Order.

### **I. PERMIT INFORMATION**

This Order represents a new NPDES General Permit issued by the Regional Water Board. Dischargers expected to seek coverage under the Order include some that have been authorized to discharge by individual NPDES permits and/or Waste Discharge Requirements and some that are new dischargers.

### **II. DISCHARGE DESCRIPTION**

#### **A. Description of Wastewater**

All discharges authorized under this Order originate as groundwater. The Regional Water Board acknowledges that groundwater may contain naturally occurring or incidental pollutants and various organic pollutants not addressed by the Fuels or VOC general permits at levels that exceed those found in surface waters, and in limited circumstances, at concentrations above applicable water quality criteria for surface waters. Such naturally occurring pollutants of concern include total dissolved solids (TDS), the common metals, and various organic pollutants not addressed by the Fuels or VOC general permits. In addition, discharges authorized by the Order may include suspended and settleable solids and turbidity that are introduced to discharges due to poorly constructed or deteriorating wells and at the points of discharge by erosion and scouring of the banks and bottoms of receiving waters.

The Order also authorizes the discharge of reverse osmosis concentrate resulting from treatment of uncontaminated ground water by reverse osmosis. Such discharges will contain the naturally occurring dissolved pollutants that are present in well waters, but these dissolved materials may be concentrated by the reverse osmosis process. In these discharges, therefore, pollutants of concern include TDS and the common metals; however, the reverse osmosis process and pre-filtering will remove all suspended and settleable material that is attributed to poorly constructed or deteriorating wells. Such discharges can introduce suspended and settleable solids and turbidity at the points of discharge due to erosion and scouring of the banks and bottoms of receiving waters. In summary, this Order regulates discharges to surface water from the three following sources:

1. Aquifer protection and salinity barrier well discharges (typically long term). These groundwater extraction facilities are in operation to protect drinking water supply

aquifers or other municipal facilities from salt water intrusion. For example, Alameda County Water District (ACWD) operates a series of wells along the southeast side of San Francisco Bay. Historically, ACWD has discharged and in the future may again discharge up to 30 MGD of extracted brackish potable groundwater and RO concentrate in the Fremont-Newark area to flood control channels. The ACWD drinking water protection well discharges are regulated under an individual NPDES Permit No. CA0038059, Order No. 00-029. The Regional Water Board plans to rescind this individual permit after this Order becomes effective.

2. RO concentrate from aquifer protection well discharges that discharges to storm drain systems and/or to engineered flood control channels that drain to estuarine environments or directly discharge to estuarine environments (discharges are typically long term). Pumped groundwater may be treated by RO so that the groundwater may be returned to the drinking water supply, and the RO concentrate discharged as waste. For example, this is the case with the ACWD RO facility located in Newark. The ACWD RO discharge was regulated under NPDES Permit No. CA0038059, Order No. 00-029. The Regional Water Board plans to rescind this individual permit once ACWD obtains coverage under this Order. ACWD plans to double the capacity of the existing Newark RO facility in the near future and bring another similar facility on line in Fremont within the next 15 years. RO Concentrate discharges that are permitted under industrial pretreatment requirements to a permitted publicly-owned treatment works (POTW) are not required to obtain coverage under this Order.
3. Structural dewatering resulting in greater than 10,000 gallons per day and requiring treatment (typically long term). These are long-term dewatering systems under or around buildings and pipelines to remove groundwater infiltration. Buildings and underpass structures are two examples of structures that may require continuous dewatering. Treatment is required where a physical, biological, or chemical treatment process is necessary in order for the structural dewatering discharge to comply with the prohibitions and limitations of this order.

## **B. Discharge Points and Receiving Waters**

The Order authorizes otherwise qualified discharges to all receiving waters of the San Francisco Bay Region, including inland surface waters, enclosed bays, estuaries. The beneficial uses of these receiving waters are described in Section II, Findings, of the Order. Condition No. 5 of the Notice of Intent (NOI) Form (Attachment B) requires the Discharger to provide discharge location data and a map with the discharge path highlighted.

## **C. Summary of Existing Requirements**

Dischargers expected to seek coverage under the General Permit include some that have been authorized to discharge by individual NPDES permits and/or Waste Discharge Requirements. For example, the individual NPDES permit for discharges of uncontaminated groundwater that have previously been issued to ACWD by the Regional Water Board has established effluent limitations only for acute toxicity.

#### **D. Compliance Summary**

This is a new Order. As applicable to ACWD, this Discharger complied with the Order No. 00-029 requirements.

#### **E. Planned Changes**

As required in Attachment D, a Discharger authorized under this Order shall submit a modified NOI before making any material change in the character, location, or volume of the discharge.

### **III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in the Order are based on the requirements and authorities described in this section.

#### **A. Legal Authorities**

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and its implementing regulations adopted by the USEPA, and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for the point source discharges described herein to surface waters of the Region. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260).

Pursuant to NPDES regulations at 40 CFR 122.28, States may request authority to issue general NPDES permits. On June 8, 1989, the State Water Board applied to the USEPA requesting revisions to its NPDES Program in accordance with 40 CFR 122.28, 123.62, and 403.10, including a request to add general permit authority to its approved NPDES Program. On September 22, 1989, the USEPA, Region 9, approved the State Water Board's request, granting authorization for the State to issue general NPDES permits.

Pursuant to NPDES regulations at 40 CFR 122.28(a)(2) general permits may be used to regulate point source discharges that:

1. Involve the same or substantially similar types of operations,
2. Discharge the same types of wastes,
3. Require the same effluent limitations,

4. Require the same or similar monitoring, and
5. In the opinion of the Executive Officer, are more appropriately controlled under a general permit than under individual permits.

This Order shall become effective about two months after the date of its adoption provided the Regional Administrator, USEPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn. This general permit does not cover direct discharges to the Pacific Ocean.

## **B. California Environmental Quality Act (CEQA)**

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

## **C. State and Federal Regulations, Policies, and Plans**

**1. Water Quality Control Plans.** The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, Office of Administrative Law and the U.S. EPA, where required. The Basin Plan designates beneficial uses of receiving waters, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed by the Plan. Beneficial uses of any water body specifically identified in Chapter 2 of the Basin Plan generally apply to its tributary streams. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes a policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses are designated for all waters of the San Francisco Bay Region and are designated for coastal and inland waters, wetlands, and ground waters. Applicable beneficial uses of surface waters of the San Francisco Bay Region are listed below.

- Agricultural Supply
- Areas of Special Biological Significance
- Cold Freshwater Habitat
- Ocean, Commercial and Sport Fishing
- Estuarine Habitat
- Freshwater Replenishment
- Groundwater Recharge
- Industrial Service Supply
- Marine Habitat

- Fish Migration
- Municipal and Domestic Supply
- Navigation
- Industrial Process Supply
- Preservation of Rare or Endangered Species
- Water Contact Recreation
- Non-Contact Water Recreation
- Shellfish Harvesting
- Fish Spawning
- Warm Freshwater Habitat
- Wildlife Habitat

The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (the Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface water of the State.

This Order implements applicable provisions of the Basin Plan and the Thermal Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. Approximately forty water quality criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which established new criteria for toxics in the State and incorporated the previously adopted criteria of the NTR. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority, toxic pollutants, applicable to inland surface waters, enclosed bays, and estuaries of the State.
3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
4. **Alaska Rule.** On March 30, 2000, at 40 CFR 131.32, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000)] Under the revised regulation (also known as the Alaska Rule), new and revised standards

submitted to USEPA after May 30, 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA before May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

- 5. Antidegradation Policy.** NPDES regulations require that State water quality standards include an antidegradation policy consistent with the federal policy established at 40 CFR 131.12. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the state and federal antidegradation policies. As discussed in the Fact Sheet, discharges authorized under this Order are consistent with applicable antidegradation provisions of NPDES regulations at 40 CFR 131.12 and with State Water Board Resolution No. 68-16.
- 6. Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits; i.e., effluent limitations in a reissued permit must be at least as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. This Order/General Permit is consistent with applicable anti-backsliding requirements, as dischargers, previously subject to individual NPDES permits with limitations more stringent than imposed by this Order, will not be authorized to discharge under the Order/General Permit.

#### **D. Impaired Water Bodies on CWA 303(d) List**

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list]. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads and associated waste load allocations.

### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the NPDES regulations: 40 CFR 122.44 (a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44 (d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs may be established: (1) using USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3)

using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44 (d) (1) (vi). The Basin Plan contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof, or to San Francisco Bay south of the Dumbarton Bridge. In general the groundwater discharges regulated by this Order may be exempted from these prohibitions because these discharges are normally associated with drinking water or infrastructure protection activities.

## **A. Discharge Prohibitions**

1. Discharge Prohibition III. A (no discharge other than that described in this Order). This prohibition is based on California Water Code section 13260, which requires the filing of a Report of Waste Discharge (ROWD) before discharges can occur. Discharges not described in the ROWD (here, the NOI), and subsequently in the Order, are prohibited.
2. Discharge Prohibition III. B (no discharges at flow rates greater than authorized). Discharges authorized under the Order shall be no greater than as described to the Regional Water Board in an NOI. When considering authorization, the Regional Water Board will consider the proportion of the receiving water flow contributed by the discharge and will consider potential erosive effects of the discharge on the receiving water. Flow rate will, therefore, be an important consideration in the authorization process, and flows greater than those considered in the authorization process will be prohibited to assure protection of receiving waters.
3. Discharge Prohibition III. C (discharges shall not cause pollution, contamination, or nuisance). This prohibition is established to assure protection of receiving waters from the effects of pollution, contamination, and nuisance, as those terms are defined by as defined by CWC Section 13050 of the California Water Code.
4. Discharge Prohibition III. D (no discharges at a volume or velocity that causes erosion and/or scouring). This prohibition is established to protect receiving waters from potential adverse physical effects of excessive discharger volumes and velocities at the points of discharge to receiving waters.
5. Discharge Prohibition III. E (no discharges of filter backwash water, membrane cleaning solutions, or other waste streams associated with reverse osmosis (other than reverse osmosis concentrate). Although the Order authorizes only the discharge of ground water and concentrate resulting from treatment of ground water by reverse osmosis, this prohibition clarifies that the discharge of filter backwash

water, membrane cleaning solutions, or other waste streams associated with reverse osmosis (other than reverse osmosis concentrate) are not authorized by the Order.

6. Discharge Prohibition III. F (no discharges of well drilling fluids). Although the Order authorizes only the discharge of uncontaminated ground water and concentrate resulting from treatment of uncontaminated ground water by reverse osmosis, this prohibition clarifies that the discharge of well drilling fluids are not authorized by the Order.
7. Discharge Prohibition III. G and H (Discharges of groundwater contaminated with volatile organic compounds (VOCs) and Fuels are prohibited). Although these prohibitions are obvious, they are included to remind Dischargers of VOCs or Fuels contaminated groundwater to apply for coverage under these specific permits.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

CWA Section 301 (b) and NPDES regulations at 40 CFR 122.44 require permits to, at a minimum, meet applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards.

The CWA requires the USEPA to develop effluent limitations, guidelines and standards (Effluent Limitations Guidelines - ELGs) representing application of best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and best available demonstrated control technology for new sources (NSPS), for specific industrial categories. Where USEPA has not yet developed ELGs for a particular industry or a particular pollutant, Section 402 (a) (1) of the CWA and USEPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

### **2. Applicable Technology-Based Effluent Limitations**

Except for chlorine residue and pH, the Order does not establish technology-based effluent limitations. The effluent chlorine residue limitation limit applies only to the Dischargers that chlorinate their well water. Whether the chlorine limitation applies to a particular covered facility shall be determined based on its NOI, and confirmed in the notice authorization to discharge for that facility.

Effluent Limitations A.1 for chlorine residue and A.2 for pH are both pursuant to Table 4-2 (page 4-69) of the Basin Plan. While the Basin Plan defines the effluent limit as 0.0 mg/l, a measurement of greater than 0.08 mg/l is considered a violation. This figure originally came from negotiations with the water treatment plants who were using field chlorine test kits. Since the discharges to which this limit applies are likely to be in remote areas, field kits may be the only measurement tool available, and therefore, the 0.08 mg/l reporting level is appropriate. If during the 5-year term of this permit, the water treatment plants start using more sensitive field kits with reporting levels lower than 0.08, then a lower reporting level may be considered for the next permit reissuance.

## **C. Water Quality-Based Effluent Limitations (WQBELs)**

### **1. Scope and Authority**

NPDES regulations at 40 CFR 122.44 (d) (1) (i), require permits to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard (Reasonable Potential). The process for determining Reasonable Potential and calculating WQBELs, when necessary, is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in the CTR, NTR, Basin Plan, and other State plans and policies.

### **2. Applicable Beneficial Uses and Water Quality Criteria and Objectives**

The Order authorizes certain discharges to inland surface waters, enclosed bays, and estuaries within the San Francisco Bay Region. Beneficial uses of these receiving waters, as designated by the Basin Plan are described in Section II, Findings, of the Order. The water quality criteria applicable to these receiving waters are established by the NTR, CTR, and the Basin Plan.

- a. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in fresh water, and lead, mercury, nickel, silver, zinc, and total polynuclear aromatic hydrocarbons (PAHs) in salt water. The narrative toxicity objective states in part “[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.” The bioaccumulation objective states in part “[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.” Effluent limitations and provisions contained in this

Order are designed to implement these objectives, based on available information.

- b. NTR. The NTR establishes numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including Suisun Bay and the Delta.
- c. The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as San Francisco Bay, except where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants. The Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).

### **3. WQBELs**

NPDES regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for all pollutants (non-priority or priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required.

Because discharges authorized by the Order originate as groundwater, discharges are expected to have minimal impact on receiving water quality, therefore the Regional Water Board is establishing WQBELs only for acute toxicity and pH. These limitations are based on Basin Plan Table 4-4 (page 4-70) and page 3-3.

For discharges of reverse osmosis concentrate, the Regional Water Board understands that naturally occurring constituents will be concentrated by the process. Although the Regional Water Board cannot identify or project specific constituents in these discharges that have a reasonable potential to contribute to exceedances of applicable water quality criteria, the concentration effect may lead to effluent quality that has adverse impacts on receiving water quality. The Order, therefore, establishes effluent limitations for whole effluent acute toxicity, as a parameter that will indicate poor effluent quality. The Order also establishes discharge specifications and monitoring requirements that are meant to highlight pollutants of concern in all discharges.

### **4. WQBEL Calculations**

Not Applicable

### **5. Whole Effluent Toxicity (WET)**

The basis for Effluent Limitations A.3 (toxicity) is Table 4-4 (Chapter 4, Page 70) of the Basin Plan. The basis for using rainbow trout and 96-hour static renewal bioassays is in Chapter 4, Page 9, of the Basin Plan. The basis for repeating the toxicity testing if the percentage of surviving test organisms is less than the required survival percentage, and the requirements to investigate the cause of mortality is based on 40 CFR 122.41(d), which is needed to minimize adverse impacts from discharges in violation of requirements. Non-compliance is also a cause for termination of the authorization to discharge (40 CFR 122.64).

#### **D. Discharge Specifications**

Because discharges authorized by the Order originate as groundwater, the Order establishes only a few specific effluent limitations and otherwise relies on implementation of Best Management Practices (BMP) Plans to control authorized discharges. Discharge Limitations established by the Order require authorized dischargers to compare effluent data, generated through routine monitoring, to certain criteria. Exceedance of any of the specified criteria triggers additional discharger requirements, which, in extreme circumstances, may lead to discontinuance of coverage under the Order (following public notice and opportunity for a hearing pursuant to Special Provision C.4). The Discharge Specifications are designed to allow the Order to impose few specific effluent limitations, while assuring that authorized discharges are not creating adverse impacts on receiving water quality. When adverse impacts are highlighted following exceedance of a trigger, dischargers are directed to confirm the findings, to treat the discharge, evaluate its effect on receiving waters, and may be required to seek coverage under an individual NPDES permit.

#### **E. Interim Effluent Limitations**

Not Applicable

#### **F. Reclamation and Land Discharge Specifications**

In general, these specifications are consistent with sound common reuse practices and the Regional Water Board Resolution No. 88-160.

### **V. RATIONALE FOR RECEIVING WATER LIMITATIONS**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order.

#### **A. Surface Water**

These limitations are based on the narrative/numerical objectives contained in Chapter 3 of the Basin Plan and as identified in Section V.A. of this Order.

The basis for V.A.1.a is on page 3-3 of the Basin Plan;  
The basis for V.A.1.b is on page 3-2 of the Basin Plan;  
The basis for V.A.1.c is on pages 3-3 and 3-4 of the Basin Plan  
The basis for V.A.1.d is on page 3-3 of the Basin Plan;  
The basis for V.A.1.e is on pages 3-2, 3-3, and 3-4 of the Basin Plan;  
The basis for V.A.2.a is on page 3-3 of the Basin Plan;  
The basis for V.A.2.b is on page 3-3 of the Basin Plan;  
The basis for V.A.2.c is on page 3-3 of the Basin Plan; and  
The basis for V.A.2.d is on pages 3-4 of the Basin Plan.  
The basis for V.A.2.e is on pages 3-4 of the Basin Plan.

## **B. Groundwater**

Not Applicable.

## **VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

The principal purposes of a monitoring program by a discharger are to:

1. Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,
2. Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,
3. Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and
4. Prepare water and wastewater quality inventories.

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment D of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for the facilities covered by this Order.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP also contains a sampling program specific for the Facilities covered by this Order. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent

limitations are established, is also required to provide data for decision-making whether additional effluent limitations are required (e.g. effluent limitations for a subset of inorganic compounds for RO discharges).

#### **A. Influent Monitoring**

No influent monitoring is required by the Order, unless effluent violations or trigger constituent values are exceeded in the previous self monitoring report. In that event, influent monitoring would be required as an investigatory to determine the cause of the exceedance.

#### **B. Effluent Monitoring**

Effluent monitoring is required to determine compliance with effluent limitations and to allow ongoing characterization of discharges to determine potential adverse impacts and to determine continued suitability for coverage under the Order.

In addition to discharge rate, effluent is monitored for hardness, pH, totals suspended and total dissolved solids, salinity, and turbidity. If chlorine is applied to well water, chlorine monitoring is required to assure that no measurable chlorine residual remains in effluent. Acute toxicity monitoring is required to determine compliance with effluent limitations and as a general measure of effluent quality. And, monitoring is required for the metals and other priority, toxic pollutants which have water quality criteria established by the NTR and CTR.

#### **C. Whole Effluent Toxicity Testing Requirements**

The selected test species and frequency of testing are specified in Basin Plan Page 4-9 and Table 4-4 (Page 4-70), respectively, and are appropriate for the range of discharges to be covered by this Order.

#### **D. Receiving Water Monitoring**

The receiving water monitoring program is described in the Monitoring and Reporting Program (MRP) (Attachment E), and for the majority of constituents, is only required by the Order if effluent violations or trigger constituent values are exceeded in the previous self monitoring report. The exceptions are flow rate, salinity, and turbidity, which dischargers are required to monitor on a quarterly basis. Collecting data on flow rate and salinity will help the Regional Water Board staff evaluate the overall impacts of discharges covered in this permit, over the 5-year permit cycle. Turbidity, because it is caused by the force of the discharge as it enters the receiving water, can only be accurately assessed by monitoring the receiving water.

#### **E. Other Monitoring Requirements**

The purpose of additional monitoring requirements is to investigate complaints, identify the discharges that should be regulated by individual NPDES permits, coordinate storm water monitoring with municipalities, and quantify potential impacts of extracted and treated groundwater discharge on the receiving water and the ambient conditions of the receiving waters.

## **VII. RATIONALE FOR PROVISIONS**

### **A. Standard Provisions**

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment C. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41 (a) (1) and (b) - (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25 (a) (12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41 (j) (5) and (k) (2), because the enforcement authority under the California Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387 (e).

### **B. Monitoring and Reporting Requirements**

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E) of the Permit. This provision requires compliance with Attachment E, which is based on 40 CFR 122.63, 122.41, 122.48, 122.62, and 124.5, CWC Sections 13267 and 13383. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP contains sampling programs for authorized facilities. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents is required to provide ongoing characterization of authorized discharges to assure that receiving waters are protected and that authorized discharges remain suitable for coverage under the Order.

### **C. Special Provisions**

1. Reopener Provisions. These provisions are based on 40 CFR 122.41(f) and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.
2. Basis for Notice of Intent (NOI) Application. Provision VI.C.2, Notice of Intent (NOI) Application, is based on 40 CFR 122.28(b).
3. Basis for NOI Review. Provision VI.C.3, NOI Review, is based on 40 CFR 122.28(b).
4. Basis for Discharge Authorization. Provision VI.C.4, Discharge Authorization, is based on 40 CFR 122.28(b).
5. Basis for Non-Compliance as a Violation. Provision VI.C.5, Non-Compliance as a Violation, is based on 40 CFR 122.41(a).
6. Basis for Provision VI.C.6. In general, the Dischargers authorized under this Order are expected to use Best Management Practices (BMP) to reduce the potential negative impacts of pollutants in their discharges. However, some pollutants may be detected in the effluent of some of the treatment or discharge systems. These pollutants include both organic and inorganic compounds. The purpose of these provisions is to require Dischargers to do additional activities should any pollutants exceed the triggers in Table F-1. These triggers are not effluent limitations and should not be construed as such. Instead, they are levels at which additional investigation is warranted to determine whether a numeric limit for a particular pollutant is necessary. The Table F-1, Column A for discharges to freshwater bodies, concentration-based triggers are set at the lowest value of the following: Basin Plan Table 3-6 Water Quality Objectives for Agricultural Supply, State Maximum Contaminant Levels, Federal Maximum Contaminant Levels, California Toxics Rule lowest freshwater criterion, or California Toxics Rule criterion for drinking the water and fish consumption. Table F-1, Column B for Discharges to Bay/Estuary, concentration-based triggers are set at the lowest value of the following: California Toxics Rule lowest saltwater criterion, California Toxics Rule lowest freshwater criterion, or California Toxics Rule criterion for fish consumption. The reason for this approach is explained below.
  - a. **Triggers for Inorganic Compounds.** Antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc (hereinafter called inorganic compounds) may be present in groundwater dewatering discharges, primarily due to background concentrations in the groundwater being extracted. Water Board staff's best professional judgment is that the loading of inorganic compounds from discharges covered by this Order is negligible when compared to loadings from municipal and industrial point-source discharges and stormwater discharges. Therefore, it is acceptable to utilize the trigger monitoring system for these compounds instead of designating them as effluent limits.

- b. **Triggers for Organic Compounds.** Dischargers authorized under this Order are expected to use BMPs. Sites where pesticides or other conservative pollutants have adversely impacted groundwater are not eligible for coverage under this Order. It is possible that organic compounds may be detected in the effluent of some of the discharge systems. This could be due to the movement of the contaminated groundwater from a neighboring site into the capture zone of the facility authorized under this Order, and may occur after discharge has been authorized, and groundwater is mobilized. Table F-1 contains concentration-based triggers for conducting additional activities when the trigger compounds have been detected above the trigger value. This provision would allow Dischargers to continue the discharge while investigating the toxicity and ability to treat any detected volatile or semi volatile organic compounds, in excess of Table F-1 triggers. If a Discharger detects any Fuels or Solvent related pollutants in the effluent or any extraction wells, the Discharger shall apply for discharge authorization under general NPDES No. CAG912002 (Fuels) or NPDES No. CAG912003 (Solvent), respectively.

**Table F-1. Trigger Compounds or Constituents**

Compound	CAS Number	Agricultural ug/L	State MCL ug/L	Federal MCL ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Water and Organisms ug/L	Column A for Discharges to Freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses ug/L	CTR Lowest Saltwater Criterion ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Organisms Only ug/L	Column B for Discharges to Bay/Estuary (ug/L)
Turbidity (Units)	-		5	5	-		5		-		
Total Dissolved Solids (TDS)		10,000,000	500,000				500,000				
Conductivity (mmhoms/cm)		200	900				200				
Chloride		142,000	250,000				142,000				
Antimony	7440360		6	6		14	6			4300	4300
Arsenic	7440382	100	50	10	150		10	36	150		36
Beryllium	7440417	100	4	4			4				
Cadmium	7440439		5	5	2.2		2.2	9.3	2.2		2.2
Chromium (total)	18540299	100	50	100	180		11 (See Note 1)		180		11 (See Note 1)
Chromium (VI)	18540299		-	-	11		11	50	11		11
Copper	7440508	200	1000	1000	3.1		3.1		3.1		3.1
Lead	7439921	5,000	15	15	2.5		2.5	8.1	2.5		2.5
Mercury	7439976		2	2		0.050	0.025	0.025 (See Note 2)		0.051	0.025
Nickel	7440020	200	100	-	52	610	52	8.2	52	4600	8.2
Selenium	7782492	20	50	50	5.0		5.0	71	5.0		5.0
Silver	7440224		100	100	3.4		3.4	1.9	3.4		1.9
Thallium	7440280		2	2		1.7	1.7			6.3	6.3
Zinc	7440666	2,000	5000	5000	120		120	81	120		81
Cyanide	57125		200/150	200	5.2	5.2	1.0	1	5.2	220,000	1.0
Asbestos	1332214		7 MFL	7 MFL		7 MFL	7 MFibers/L				
2,3,7,8-TCDD (Dioxin)	1746016		0.00003	0.00003		1.3E-08	1.3E-08			1.4E-08	1.4E-08
Acrylonitrile	107131		-	-		0.059	0.059			0.66	0.66
Bromoform	75252		100/80	100/80		4.3	4.3			360	360
Chlorodibromo methane	124481		100/80	100/80		0.401	0.401			34	34
Dichlorobromo methane	75274		100/80	100/80		0.56	0.56			46	46
1,2-Dichloropropane	78875		5	5		0.52	0.52			39	39
1,3-Dichloropropylene	542756		0.5	-		10	0.5			1700	1700
1,1,2,2-Tetrachloroethane	79345		1	-		0.17	0.17			11	11
Pentachloroph	87865		1	1	15	0.28	0.28	7.9	15	8.2	8.2

Compound	CAS Number	Agricultural ug/L	State MCL ug/L	Federal MCL ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Water and Organisms ug/L	Column A for Discharges to Freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses ug/L	CTR Lowest Saltwater Criterion ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Organisms Only ug/L	Column B for Discharges to Bay/Estuary (ug/L)
enol											
2,4,6-Trichlorophenol	88062		-	-		2.1	2.1			6.5	6.5
Benzidine	92875		-	-		0.00012	0.00012			0.00054	0.00054
Benzo(a)Anthracene	56553		-	0.1		0.0044	0.0044			0.049	0.049
Benzo(a)Pyrene	50328		0.2	0.2		0.0044	0.0044			0.049	0.049
Benzo(b)Fluoranthene	205992		-	-		0.0044	0.0044			0.049	0.049
Benzo(k)Fluoranthene	207089		-	-		0.0044	0.0044			0.049	0.049
Bis(2-Chloroethyl)Ether	111444		-	-		0.031	0.031			1.4	1.4
Bis(2-Ethylhexyl)Phthalate	117817		-	-		1.8	1.8			5.9	5.9
Chrysene	218019		-	-		0.0044	0.0044			0.049	0.049
Dibenzo(a,h)Anthracene	53703		-	-		0.0044	0.0044			0.049	0.049
3,3'-Dichlorobenzidine	91941		-	-		0.04	0.04			0.077	0.077
2,4-Dinitrotoluene	121142		-	-		0.11	0.11			9.1	9.1
1,2-Diphenylhydrazine	122667		-	-		0.04	0.04			0.54	0.54
Hexachlorobenzene	118741		1	1		0.00075	0.00075			0.00077	0.00077
Hexachlorobutadiene	87683		-	-		0.44	0.44			50	50
Hexachloroethane	67721		-	-		1.9	1.9			8.9	8.9
Indeno(1,2,3-cd)Pyrene	193395		-	-		0.0044	0.0044			0.049	0.049
N-Nitrosodimethylamine	62759		-	-		0.00069	0.00069			8.1	8.1
N-Nitrosodi-n-Propylamine	621647		-	-		0.005	0.005			1.4	1.4
Aldrin	309002		-	-	3	0.00013	0.00013	1.3	3	0.00014	0.00014
alpha-BHC	319846		-	-		0.0039	0.0039			0.013	0.013
beta-BHC	319857		-	-		0.014	0.014			0.046	0.046
gamma-BHC	58899		0.2	0.2		0.019	0.019			0.063	0.063
Chlordane	57749		0.1	2	0.0043	0.00057	0.00057	0.004	0.0043	0.00059	0.00059
4,4'-DDT	50293		-	-	0.001	0.00059	0.00059	0.001	0.001	0.00059	0.00059
4,4'-DDE	72559		-	-		0.00059	0.00059			0.00059	0.00059
4,4'-DDD	72548		-	-		0.00083	0.00083			0.00084	0.00084
Dieldrin	60571		-	-	0.056	0.00014	0.00014	0.0019	0.056	0.00014	0.00014
alpha-Endosulfan	959988		-	-	0.056	110	0.0087	0.0087	0.056	240	0.0087
beta-Endosulfan	33213659		-	-	0.056	110	0.0087	0.0087	0.056	240	0.0087
Endrin	72208		2	2	0.036	0.76	0.036	0.0023	0.036	0.81	0.0023
Endrin Aldehyde	7421934		-	-		0.76	0.76			0.81	0.81
Heptachlor	76448		0.01	0.4	0.0038	0.00021	0.00021	0.0036	0.0038	0.00021	0.00021

Compound	CAS Number	Agricultural ug/L	State MCL ug/L	Federal MCL ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Water and Organisms ug/L	Column A for Discharges to Freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses ug/L	CTR Lowest Saltwater Criterion ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Organisms Only ug/L	Column B for Discharges to Bay/Estuary (ug/L)
Heptachlor Epoxide	1024573		0.01	0.2	0.0038	0.0001	0.0001	0.0036	0.0038	0.00011	0.00011
Polychlorinated biphenyls (PCBs) total	1336363		0.5	0.5	0.014	0.00017	0.00017	0.03	0.014	0.00017	0.00017
Toxaphene	8001352		3	3	0.0002	0.00073	0.0002	0.0002	0.0002	0.00075	0.0002
Turbidity (Units)	-		5	5	-		5		-		
Odor-Threshold (Units)	-		3	3	-		3		-		
Sulfate	-		250,000	250,000	-		250,000		-		
Foaming Agents	-		500	500	-		500		-		
Color (Units)	-		15	15	-		15		-		
Aluminum		5,000					5,000				
Boron		500					500				
Cobalt		50					50				
Fluoride		1,000					1,000				
Iron		5,000	300				300				
Lithium		2500					2500				
Manganese		200	50				50				
Molybdenum		10					10				
Nitrate (as NO3)			45,000				45,000				
Nitrate + Nitrite (as N) NO3 + NO2 (as N)		5,000	10,000				5,000				
Nitrite (as N)			1,000				1,000				
Vanadium		100					100				
Combined Radium-226 and Radium-228 (IN pCi/l)			5				5				
Gross Alpha Particle (includes Radium-226 but excludes Radon and Uranium) (IN pCi/l)			15				15				
Tritium (IN pCi/l)			20,000				20,000				
Strontium-90 (IN pCi/l)			8				8				
Gross Beta Particle Activity (IN pCi/l)			50				50				
Uranium (IN pCi/l)			20				20				
Fuels Related Pollutants							Apply for NPDES No. CAG912002				Apply for NPDES No. CAG912002
Solvents Related Pollutants							Apply for NPDES No. CAG912003				Apply for NPDES No. CAG912003

Legend:

CAS = Chemical Abstract System

MCL = Maximum Contaminant Level

CTR = California Toxics Rule

Notes:

1 If total chromium concentration exceeds 11 then Chromium (VI) analysis shall also be done

2 Basin Plan

3: If a Discharger is reporting monitoring data with a detection level higher than 50 ug/l, the reason for a higher detection level shall be fully explained in the monitoring report.

7. Basis for Individual NPDES Permit may be Required. Provision VI.C.11, Individual NPDES Permit may be Required, is based on 40 CFR 122.28(b)(3).

## **VIII. PUBLIC PARTICIPATION**

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) is considering the reissuance of general waste discharge requirements (GWDRs) that will serve as an NPDES permit. As a step in the process towards adoption of the Order, the Regional Water Board staff has developed a tentative Order. The Regional Water Board encourages public participation in the adoption process.

### **A. Notification of Interested Parties**

The Regional Water Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through a legal notice published in the Recorder.

### **B. Written Comments**

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative GWDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on March 15, 2007.

### **C. Public Hearing**

The Regional Water Board will hold a public hearing on the tentative GWDRs during its regular Board meeting on the following date and time and at the following location:

Date: April 11, 2007 Time: 9:00 AM  
Location: Elihu Harris State Building (1st Floor auditorium)  
1515 Clay Street  
(Walking distance from City Center 12<sup>th</sup> Street BART station)  
Oakland, CA 94612

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, GWDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is <http://www.waterboards.ca.gov/sanfranciscobay> where you can access the current agenda for changes in dates and locations.

#### **D. Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

#### **E. Information and Copying**

The Report of Waste Discharges (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above during regular office hours, which are generally weekdays from 8:00 a.m. to 5:00 p.m., excluding 12:00 p.m. to 1:00 p.m. lunch hours and holidays. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

#### **F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

#### **G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Farhad Azimzadeh at (510) 622-2310 or by e-mail at [fazimzadeh@waterboards.ca.gov](mailto:fazimzadeh@waterboards.ca.gov).